

What is Claimed is:

1. A wettable polyolefin fiber or filament, comprising a melt blend

which comprises

(a) a polyolefin; and

(b) at least one compound of the formula (I)



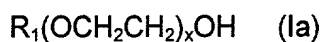
wherein

R_1 is a straight or branched chain alkyl of 22 to 40 carbon atoms and the hydrophilic oligomer is a homo- or co-oligomer consisting of monomer units derived from monomers selected from the group consisting of ethylene oxide, propylene oxide, ethylene glycol, propylene glycol, epichlorhydrin, acrylic acid, methacrylic acid, ethylene imine, caprolactone, vinyl alcohol and vinyl acetate;

and wherein the hydrophilic oligomer consists of between 2 and 10 monomer units.

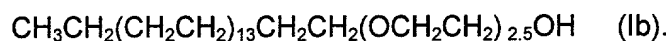
2. A fiber or filament according to claim 1 in which the polyolefin is polypropylene or polyethylene.

3. A fiber or filament according to claim 1 in which component (b) is a compound of formula (Ia)



where x is 2 to 10.

4. A fiber or filament according to claim 3 wherein in the compound of formula (Ia), R_1 is a straight chain alkyl with an average value of 30 carbon atoms and x has an average value of 2.5, which compound is represented by formula (Ib):



5. A fiber or filament according to claim 1 in which the melt blend comprises two different compounds of formula (I) which differ by having different average values for R_1 and/or different average values for the number of monomer units.

6. A fiber or filament according to claim 4 in which the melt blend comprises an additional compound of formula (I) which differs from the compound of formula (Ib) by having different average values for R_1 and/or different average values for the number of monomer units.

7. A fiber or filament according to claim 1 wherein the compounds of component (b), in total, are present from about 0.1 % to about 15 % by weight, based on the weight of the polyolefin of component (a).

8. A fiber or filament according to claim 7 wherein the compounds of component (b), in total, are present from about 1 % to about 7 % by weight, based on the weight of the polyolefin of component (a).

9. A bi-component fiber comprising a polyolefin component, wherein the polyolefin component comprises a melt blend comprising components (a) and (b) according to claim 1.

10. A woven or nonwoven fabric comprising knitted or bonded polyolefin fibers or filaments according to claim 1.

11. A woven or nonwoven fabric according to claim 10 wherein the polyolefin is polypropylene or polyethylene.

12. A woven or nonwoven fabric comprising knitted or bonded bi-component fibers according to claim 9.

13. A method for imparting permanent wettability to a polyolefin fiber, filament or woven or nonwoven fabric made therefrom, comprising melt extruding a mixture comprising a thermoplastic polyolefin and at least one compound of the formula (I) according to claim 1 into a plurality of fibers and cooling the fibers.

14. A method according to claim 13 wherein the polyolefin is polypropylene or polyethylene.

15. A method according to claim 13 wherein said fibers are drawn into a plurality of continuous filaments, a web is formed from said filaments and the filaments are at least partially bonded to form a fabric.

16. A method according to claim 13 in which the fibers or filaments are a bi-component fiber or filament comprising a polyolefin.

17. An article of manufacture comprising a woven or nonwoven fabric according to claim 10 selected from the group consisting of disposable diapers, training pants, feminine napkins, tampons, incontinence care products, wet and dry wipes, wound dressings, surgical capes, filter media and battery separators.

18. A fiber or filament according to claim 1 in which the melt blend additionally comprises an ethoxylated aliphatic alcohol that is not of formula (I).

19. A fiber or filament according to claim 1 in which the melt blend additionally comprises a 2 mole ethoxylated stearyl alcohol.

20. A fiber or filament according to claim 4 in which the melt blend additionally comprises an ethoxylated aliphatic alcohol that is not of formula (I).

21. A fiber or filament according to claim 4 in which the melt blend additionally comprises a 2 mole ethoxylated stearyl alcohol.